

**Serum from COVID-19 patients early in the pandemic shows limited evidence of cross-neutralization against variants of concern**

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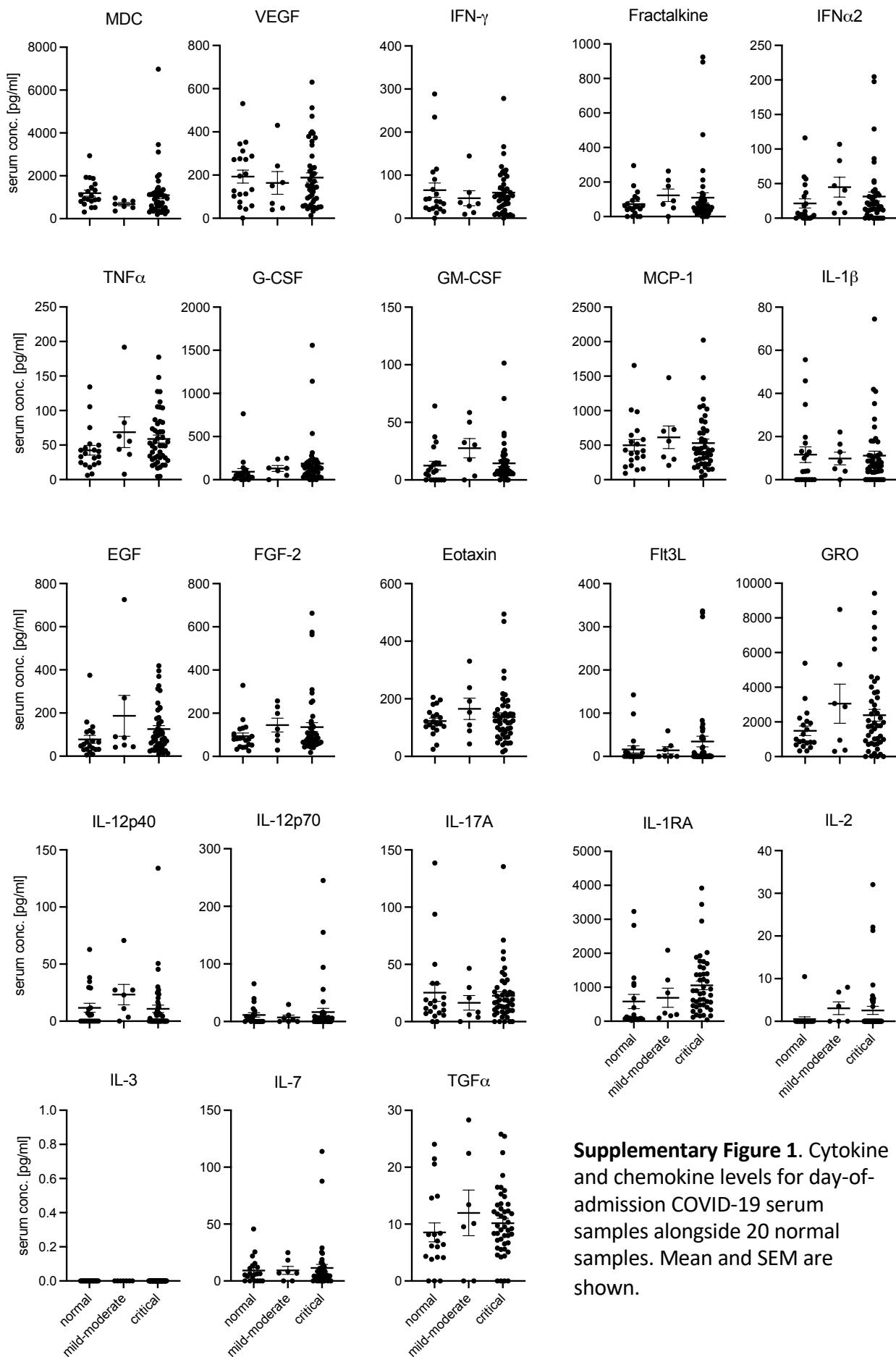
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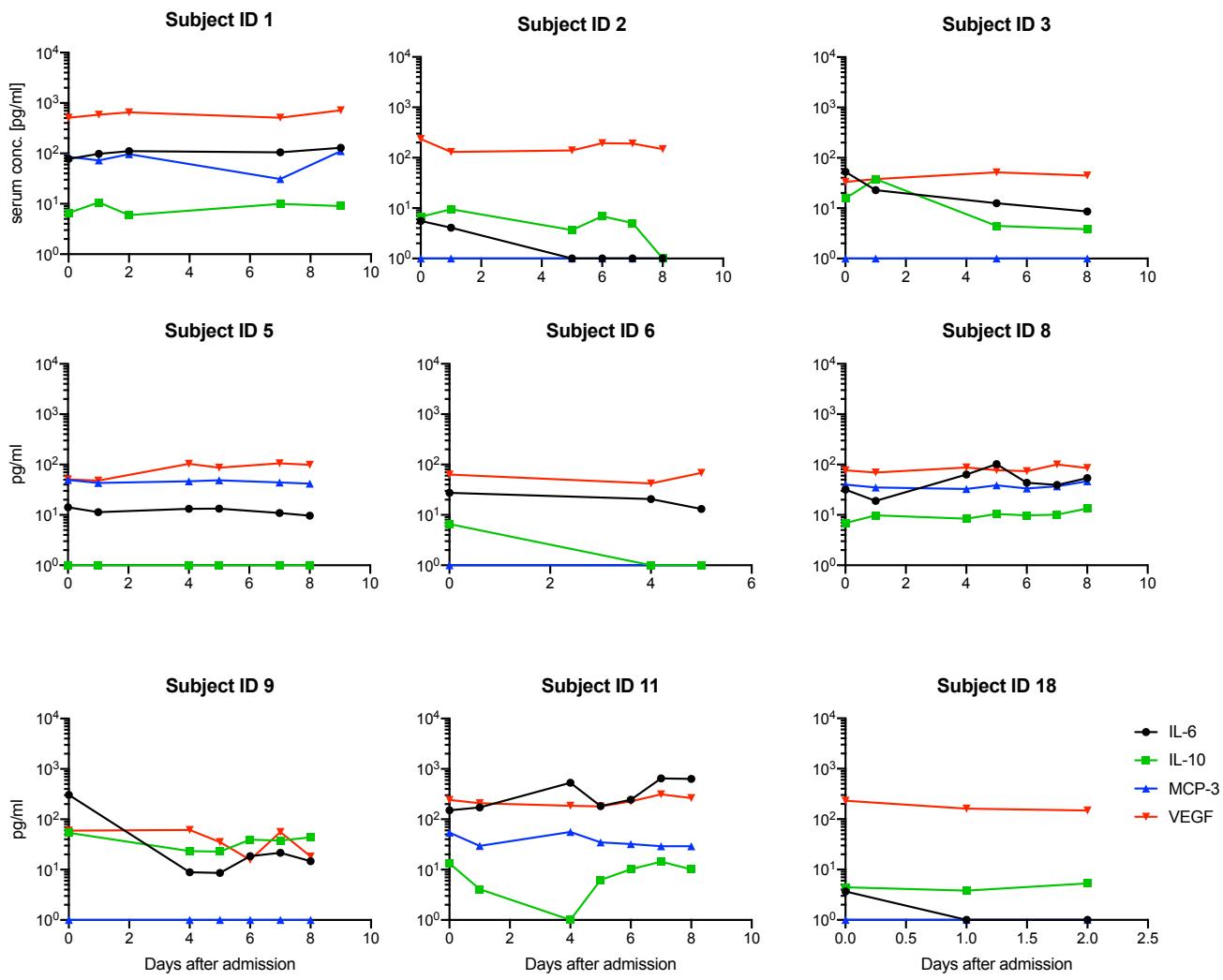
**Supplementary materials**

Supplementary Figures 1-4

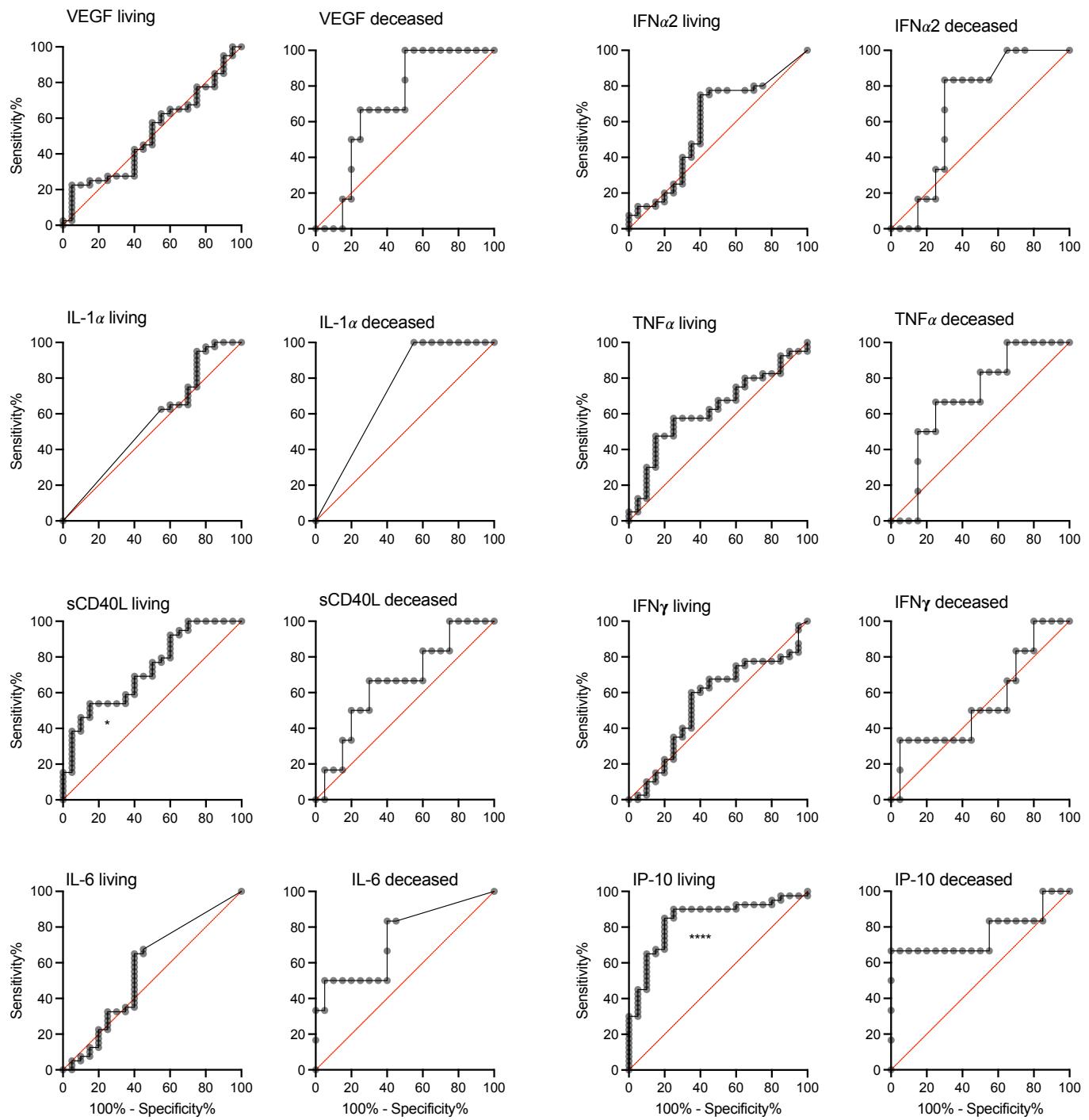
Supplementary Table 1



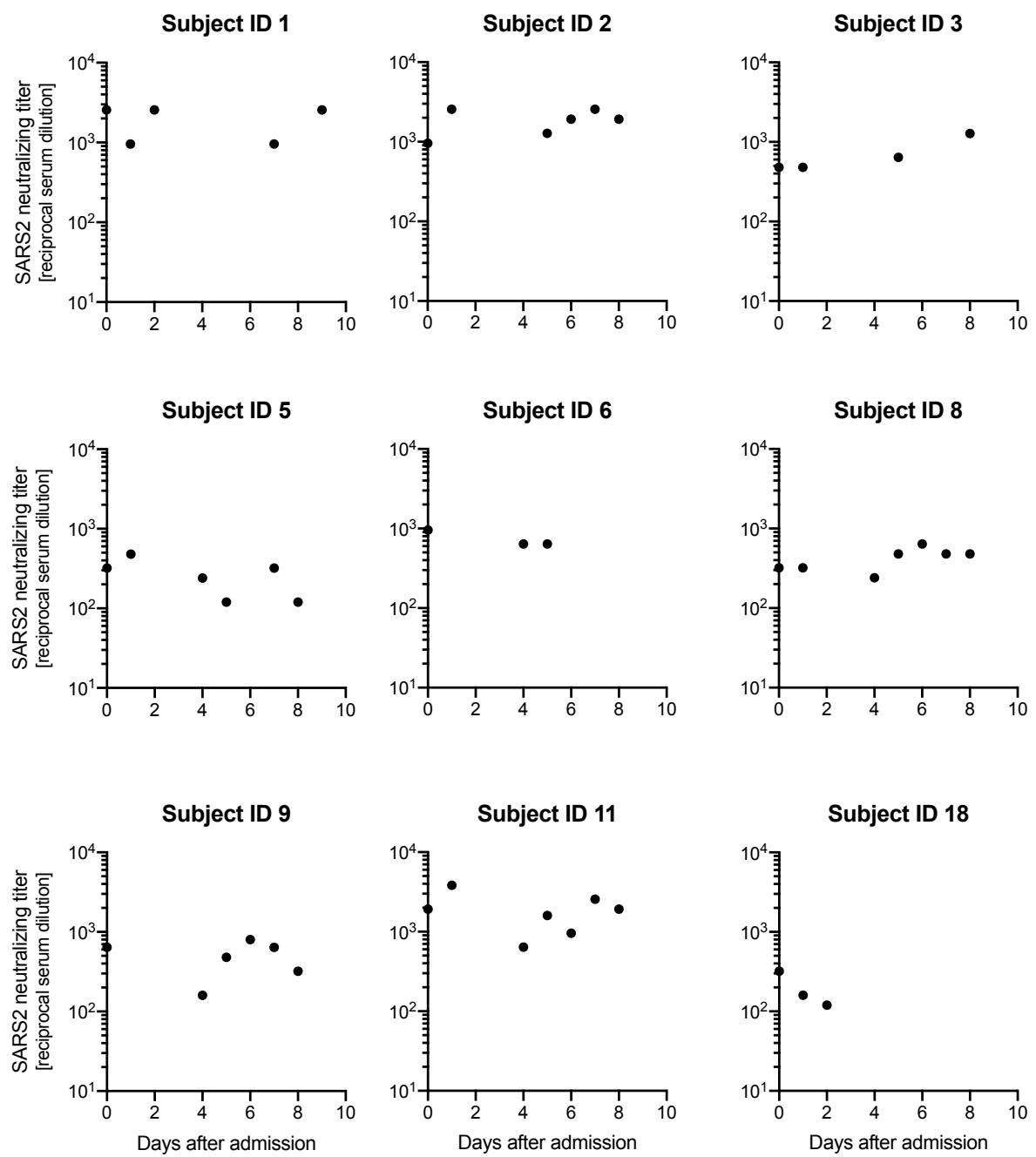
**Supplementary Figure 1.** Cytokine and chemokine levels for day-of-admission COVID-19 serum samples alongside 20 normal samples. Mean and SEM are shown.



**Supplementary Figure 2.** Cytokine and chemokine levels of selected patients over time.



**Supplementary Figure 3.** ROC curves were calculated for analytes shown in Fig. 2 comparing “normal vs. living” or “normal vs. deceased”. Statistically significant differences for sCD40L and IP-10 in the “living” group are indicated as  $p<0.0001$  (\*\*\*\*), and  $p<0.05$  (\*).



**Supplementary Figure 4.** Anti-SARS-CoV-2 neutralizing antibodies remain steady over time in selected patients.

	normal vs. living		normal vs. deceased		living vs. deceased	
	n=20	n=40	n=20	n=6	n=40	n=6
	AUC	p	AUC	p	AUC	p
<b>VEGF</b>	0.51	0.9002	0.7	0.1441	0.6875	0.1422
<b>IFN<math>\alpha</math>2</b>	0.5863	0.2792	0.6833	0.1806	0.6083	0.3964
<b>IL-1<math>\alpha</math></b>	0.5519	0.5152	0.725	0.1003	0.6875	0.1422
<b>TNF<math>\alpha</math></b>	0.6263	0.1132	0.6917	0.1616	0.5125	0.9221
<b>sCD40L</b>	<b>0.7282</b>	<b>0.0044</b>	0.6583	0.2476	0.6325	0.3006
<b>IFN<math>\gamma</math></b>	0.5481	0.546	0.55	0.715	0.6	0.4337
<b>IL-6</b>	0.5669	0.4015	0.7375	0.0828	0.6896	0.1378
<b>IP-10</b>	<b>0.84</b>	<b>&lt;0.0001</b>	0.7667	0.0515	0.6458	0.2536

**Supplementary Table 1.** Area under the curve (AUC) from ROC analysis of select cytokines.  
Statistically significant differences are highlighted in red font.